

# FOREIGN POLICY REPORTS

June 15, 1940

---

## Germany's Wartime Economy

BY JOHN C. deWILDE

---

PUBLISHED TWICE A MONTH BY THE

Foreign Policy Association, Incorporated

EIGHT WEST FORTIETH STREET, NEW YORK, N. Y.

VOLUME XVI NUMBER 7    *25¢ a copy    \$5.00 a year*

# Germany's Wartime Economy

BY JOHN C. deWILDE

*This is the first of two studies on war economy. The second will be devoted to France and Britain. Both should be read in connection with "Europe's Economic War Potential,"*

FOREIGN POLICY REPORTS, October 15, 1939.<sup>1</sup>

NOW that the United States is struggling with problems of industrial mobilization in order to carry out its national defense program, an analysis of Germany's experience in this field becomes particularly instructive. The amazing military successes achieved by the Reich can be attributed in large part to the effective way in which the country's entire economy has been geared to the war machine. Germany went into the last war economically unprepared. It wasted its resources on a lavish scale before attaining a high degree of economic organization. The Nazis were determined that this should not happen again. When they came into power, their primary aim was to create an invincible armament. As the Nazis set about their task, they gradually realized the vital importance of mobilizing the country's economic resources for this objective. They knew that rearmament and modern warfare would put a severe strain on Germany's available man power and material. A determined effort became necessary to overcome existing deficiencies and make the most effective use of the country's limited economic assets.

## GERMANY'S WEHRWIRTSCHAFT

Before the war no country devoted so much attention to wartime economic problems as Germany. The organization of economic life for war, called *Wehrwirtschaft* in the Reich, was raised to the rank of a science. Universities taught it, economic periodicals discussed it at great length, and leading authorities devoted many volumes to an analysis of this subject. But, above all, the Nazi government practiced *Wehrwirtschaft* long before engaging the

country actively in hostilities. The tremendous armament campaign, involving the expenditure of 90 billion marks<sup>2</sup> over six years, was carried out only with the aid of a regimented economy. Industry, agriculture, foreign trade and labor were all enlisted in the task of making Germany militarily invincible. Improvement in the standard of living was subordinated to this general aim.

Invoking the machinery of the totalitarian state and riding roughshod over individual freedom, the Third Reich subjected economic life to a degree of direction comparable only with that in the Soviet Union.<sup>3</sup> The state governed investment through its control of the capital market and the banking system, and its power to prohibit, where necessary, the expansion of any industry. Under the vigorous leadership of Hermann Goering, it carried out a Four-Year Plan designed to expand the "bottle-necks" hindering the production of arms, and to make the Reich more independent of foreign raw materials. In this way the government compelled industries to set up or participate in the erection of many plants for the production of staple fiber, plastics and buna (synthetic rubber), for the extraction of oil from coal and lignite, and for the increased utilization of domestic iron ore. In agriculture the *Reichsnährstand*, or Food Estate, promoted the cultivation of crops in which there was a deficiency, and systematically regulated the distribution and prices of all farm commodities from producer to consumer. Labor was regimented to a large degree. Wages and working conditions were determined by Reich Labor Trustees, regional representatives of the Minister of Labor. The training of workers for vital war industries was accelerated. To some extent the government made use of its power to limit labor's freedom of movement from occupation to occupation, and to draft workers for essential national tasks such as the building of the Westwall. Through the introduction of "labor books" for all workers and employees, the state also

1. Cf. also, J. C. deWilde, "Germany's Controlled Economy," *ibid.*, March 1, 1939; J. F. Green, "Economic Mobilization of Great Britain," *ibid.*, July 1, 1939.

2. Equivalent to about \$30,000,000,000 in purchasing power.

3. For a survey of Germany's pre-war economy, cf. deWilde, "Germany's Controlled Economy," cited.

FOREIGN POLICY REPORTS, VOLUME XVI, NUMBER 7, JUNE 15, 1940

Published twice a month by the FOREIGN POLICY ASSOCIATION, Incorporated, 8 West 40th Street, New York, N. Y., U.S.A. FRANK ROSS MCCOY, *President*; WILLIAM T. STONE, *Vice President and Washington representative*; VERA MICHELES DEAN, *Editor and Research Director*; HELEN TERRY, *Assistant Editor*. *Research Associates*: T. A. BISSON, A. RANDLE ELLIOTT, JAMES FREDERICK GREEN, FREDERICK T. MERRILL, HELEN H. MOORHEAD, DAVID H. POPPER, ONA K. D. RINGWOOD, HOWARD J. TRUEBLOOD, JOHN C. DEWILDE. Subscription Rates: \$5.00 a year; to F.P.A. members \$3.00; single copies 25 cents. Entered as second-class matter on March 31, 1931 at the post office at New York, N. Y., under the Act of March 3, 1879.

Produced under union conditions and composed, printed and bound by union labor.

came into possession of vital information regarding the distribution and training of labor. This entire system of domestic control was implemented by strict regulation of foreign trade and exchange. The foreign exchange restrictions, first imposed in 1931, had been progressively tightened so that virtually no loophole remained for illicit exportation of capital or other prohibited transactions. In the field of agriculture, a number of Reich offices regulated the importation of food products and were even empowered to buy, sell and stock commodities. In the field of industry a still larger number of offices controlled different categories of imports and determined the distribution and utilization of native as well as foreign raw materials. Foreign trade as a whole was directed in such a way as to put primary emphasis on the importation of essential war commodities.

The state was also able to devise ways and means to finance its huge expenditures. During the first few years, when Germany was still suffering from the depression, the Nazis met part of the cost through the issue of short-term "employment-creation" and "armament" bills. As labor, industry and agriculture were put to work, tax revenues began to rise sharply. Additional increases in certain tax rates and stricter methods of collection helped boost the total revenue of the Reich to 17,690 million marks in 1938-39 as compared with 6,647 million in 1932-33.<sup>4</sup> Through its control over banks, social insurance funds, and the capital market the government could utilize the national savings for its own purposes. A tight rein on prices and wages not only kept down the cost of rearmament, but also prevented the development of any real inflation. A Price Commissioner, assisted by a large staff, confined price increases to a minimum, while the government Labor Trustees regulated wages and intervened at times to fix maximum rates.

This *Wehrwirtschaft* undoubtedly gave Germany very substantial initial advantages over the Allies. It had enabled the Reich to build up stocks of vital raw materials and foodstuffs and created the machinery necessary to insure the most efficient use of the country's comparatively slender resources. It had provided Germany not only with a powerful armament, but also with an economic machine capable of turning out a vast amount of munitions from the first day of the war. Moreover, the German government had acquired valuable experience in the operation of economic controls which even at best were complicated and difficult to administer. Under the circumstances, the transition from a partial to a complete war economy became relatively

easy. On the other hand, advance economic mobilization also gave rise to certain "stresses and strains." There was a pronounced shortage of labor, and transportation facilities were severely overtaxed. The coal and machine industries could hardly keep pace with demand; and here and there replacements in plant and machinery were inadequate. In addition, there was an almost inevitable tendency toward over-organization and inelasticity.

## ECONOMIC COORDINATION

When the war broke out, the Reich in substance needed only to readjust and tighten up some of its control measures. One of the tasks was to insure coordination and centralized direction. Hitherto Marshal Goering had been in charge of the Four-Year Plan, while Dr. Funk, Minister of Economics, had functioned as a kind of general economic dictator (*Generalbevollmächtigter der Wirtschaft*). On August 30 the Führer decreed the formation of a Ministerial Council for Reich Defense, headed by Goering and endowed with sweeping powers to coordinate economic and administrative activity.<sup>5</sup> Similar functions were entrusted to regional Defense Commissars whom Goering named from the ranks of Reich provincial governors or other high administrative officials.<sup>6</sup> Provincial food and lumber bureaus and district economic offices were set up to carry out all economic measures relating to national defense.<sup>7</sup> The Reich Organization for Industry, originally established as a semi-autonomous organization of private business, was enjoined to cooperate with these offices as well as the central authorities, and was thus completely reduced to the position of an administrative arm of the government.<sup>8</sup> To the Chamber of Commerce and Industry, which formed part of this organization, the Minister of Economics appointed special Reich Commissioners who, under the direction of the district economic officers, were to watch over stocks and see that business concerns were properly provisioned with labor, transportation facilities, means of production and power.<sup>9</sup> In addition, the government set up local food and economic offices to administer regulations regarding civilian consumption.

In January 1940 this administrative hierarchy was extensively reorganized at the top in order to eliminate conflicts in jurisdiction. Dr. Funk, who had apparently proved unequal to his task, was de-

5. For text, cf. *Völkischer Beobachter*, August 31, 1939.

6. *Ibid.*, September 6, 1939.

7. "Die Wirtschaftsverwaltung," *ibid.*, September 8, 1939.

8. "Zusammenarbeit zwischen Staat und Wirtschaft," *ibid.*, September 22, 1939.

9. Cf. H. E. Posse, "Die militärische und wirtschaftliche Front," *Der deutsche Volkswirt*, September 22, 1939.

4. Deutsche Bank, *Wirtschaftliche Mitteilungen*, May 30, 1939, p. 144.

prived of the office of economic coordinator, and left in charge of economic and financial policy in the narrower sense as head of the Ministry of Economics and the Reichsbank. The energetic Marshal Goering took over direction of the entire war economy with the assistance of a council including the chief of the war economy office of the High Command, a representative of the deputy leader of the Nazi party, and state secretaries representing the Ministries of Labor, Transportation, Interior, Economics and Agriculture, as well as the Reich Forest Office and the Four-Year Plan Administration.<sup>10</sup> Whether this new council has functioned more effectively is difficult to discover.

### INDUSTRY ON A WAR FOOTING

Originally the Reich government had intended to close a large number of plants and to concentrate the production of war materials on those concerns which were most efficient and strategically well located. In practice, however, such a drastic course was not pursued, partly because the social consequences involved in a wholesale redistribution of labor were too formidable, partly because the much-feared total war, with extensive air bombardment, did not immediately develop. Government orders were distributed among as many factories as possible, particularly in the textile and leather industries which were hard hit by the sharp curtailment of civilian consumption.<sup>11</sup> Although numerous concerns producing non-essential goods were ultimately shut down, care was taken to adjust such closings as far as possible to available opportunities for the employment of released labor in war industries situated in the same or near-by localities. By decree of February 19, 1940 the government imposed the cost of closing these enterprises on the concerns which remained in business. Under the Hitler régime all firms and individual entrepreneurs, whether in industry, banking, publishing or the handicrafts, had been organized in associations under the aegis of the Reich Agricultural Estate, the Chamber for Culture, and the Reich Organization for Industry. These organizations were simply directed to levy contributions on their members in order to defray the depreciation charges, pension obligations and interest and rent payments of those plants and shops which were compelled to close.

Although the production of civilian goods could be and was severely curtailed, it proved much more difficult to reduce the operations of the construction

industry which normally required much labor and raw material. An order issued in December 1939 forbade the initiation of any construction work which was not defined as "important for war" by the Reich Building Commissar. In the past few years, however, residential and other "non-essential" building had already been restricted in favor of the construction of a great network of automobile highways, Four-Year Plan enterprises, military barracks and airports, workers' housing, etc. It was found that the war demanded the continuation of much industrial and military construction, as well as the provision of housing for workers in new industrial areas. By February 1940 building plans still called for a volume about 75 per cent of that carried out in 1938.<sup>12</sup> These projects have been handicapped, however, by a shortage of material and labor. Both these essentials have been made available only according to a scale of urgency determined by the Building Commissar.

Every effort was made to increase the capacity of war industries and to convert other factories for the production of war material. The National Service Law (*Reichsleistungsgesetz*) of September 1, 1939 authorized designated civil and military authorities to require business concerns to produce, stock, or surrender goods which the government might need.<sup>13</sup> Under a decree of September 5, 1939 the Minister of Economics could also compel industrial enterprises to combine for the purpose of rationalizing production, pooling patents, erecting new plants, promoting exports and the like.<sup>14</sup> By January 1940 about twenty new cartels had been formed for such purposes.<sup>15</sup> To facilitate the conversion of plants for war production the High Command issued special three-month bills in denominations of 10,000 Reichsmarks or more, which could be used by firms as collateral for bank credits.<sup>16</sup> The Bank for Public Works (the so-called *Oeffa*) jumped into the breach by guaranteeing credits up to a total of 100,000,000 Reichsmarks for essential industries which were involved in temporary financial difficulties as a result of the war.<sup>17</sup> A much larger total—500,000,000 Reichsmarks—was made available through the *Industriebank* as loans to concerns which could not obtain money for the erection of new or the conversion of old plants.<sup>18</sup>

12. *Der deutsche Volkswirt*, February 16, 1940, p. 615.

13. *Völkischer Beobachter*, September 7, 1939.

14. *Reichsgesetzblatt*, I, 1939, No. 164.

15. *Deutsche Bergwerks-Zeitung*, January 6, 1940.

16. *Der deutsche Volkswirt*, September 29, 1939, p. 2464. These short-term bills were called *Wehrmachtverpflichtungsscheine*.

17. *Ibid.*, September 22, 1939, p. 2441, and November 10, 1939, p. 154.

18. *Ibid.*, October 6, 1939, pp. 9-10.

10. *Deutsche Bergwerks-Zeitung*, January 5, 1940.

11. Cf. *Der deutsche Volkswirt*, September 29, 1939, p. 2473; also Wolfgang Holtz, "Auftrags- und Rohstofflenkung im Kriege," *ibid.*, December 15, 1939.



## EXPANSION OF WAR INDUSTRIES

By opening up the capital market the Nazi government also facilitated the large-scale expansion of vital war industries. Since April 1, 1939 the government has abstained from floating long-term loans. From that time until the end of March 1940 industrial bond issues have aggregated 911,000,000 Reichsmarks. Since the outbreak of the war there have been 31 such issues, totaling 536,000,000 Reichsmarks. The coal, iron and steel industry has accounted for 41.3 per cent of this total, the power industry for 28.9 per cent, and the chemical industry for 12.9 per cent.<sup>19</sup> In this way the capacity of industries directly or indirectly producing armaments has been considerably expanded. The proceeds of a number of loans have gone into the erection of additional plants for the manufacture of oil from coal and lignite, of staple fiber, plastics and synthetic rubber. Thus the government expects to raise the output of synthetic oil, which amounted to between 1.75 and 1.90 million tons in 1939, to about 3.4 million in 1940 and over 4 million in 1941.<sup>20</sup> Together with domestic production of natural crude oil and benzol (a by-product of coke), Germany may have an output of over 5 million tons by 1941—a total still about one to two million tons short of peace-time consumption.

Despite the vigorous intervention of the government there still appear to be bottlenecks in plant capacity. The appointment of a Minister of Munitions on March 20, 1940 indicated that output was not quite satisfactory. For this task the government selected Dr. Fritz Todt, a vigorous engineer who had been in charge of constructing the automobile highways and the Westwall and had for some time functioned as czar of the building industry.<sup>21</sup> The engineering or machine industry finds it difficult to supply the needs of armament, agriculture and exports at the same time. The Commissar of Machine Production, appointed in December 1938, worked out a program providing for a 35 per cent increase in the output of machine tools by 1940, a trebling of the output of locomotives, and a similar acceleration in the production of other machines.<sup>22</sup> Nevertheless, the shortage of machinery became so acute by December 1939 that the Commissar received additional powers to insure proper distribution of the

output and priority for the most urgent government orders.<sup>23</sup> Although the acquisition of coal and lignite deposits in Poland and Czechoslovakia gave Germany the largest coal-producing capacity in Europe, there was a severe coal shortage during the winter of 1939-40. In large part this was due to inadequacy of transportation facilities, since the unusually severe winter closed virtually all of Germany's inland waterways. The demand for coal proved almost insatiable. Germany had to export considerable quantities in order to pay for essential imports. At least four tons of coal were required for the production of one ton of synthetic oil. The manufacture of buna, plastics and aluminum was possible only with vast quantities of coal or electric power derived from coal. At the same time a shortage of miners, together with a decline in output per man-hour, made it difficult to maintain output.

## FOOD PRODUCTION

In the field of agriculture the government is making intensive efforts to maintain production and cover the two major German deficiencies—fodder and feed, on which the production of livestock and dairy products depends, and edible fats, including vegetable oils, lard and butter. It launched a campaign to increase the cultivation of root crops, particularly potatoes, by 10 to 15 per cent over the 1939 level, and to expand still further the production of green fodder crops on which great emphasis had been put in recent years. In order to remedy the shortage of vegetables, the government enjoined farmers to raise the acreage devoted to leguminous plants by 15 per cent. A subsidy was offered for every acre of unused meadow land put to the plow. The fat situation is to be improved by increased cultivation of oil seeds such as flax and rape-seed. In addition, the dairy industry was encouraged by an increase in the price of whole milk and butter. In return, farmers were ordered to deliver all their milk to dairies and creameries, with the exception of an indispensable minimum for farm consumption.<sup>24</sup>

Because the German soil is already intensively cultivated, the Reich will do well if it can nearly maintain aggregate pre-war farm output. To this end measures have been taken to combat the deficiencies in fertilizer and labor which were primarily responsible for the sharp decline in production

19. Cf. *The Economist* (London), April 13, 1940, p. 686. A list of industrial issues is given weekly in *Der deutsche Volkswirt*.

20. *Neue Zürcher Zeitung*, February 21, 1940. Some experts doubt that this goal will be reached. Cf. René Sédillot, "Le Problème du Pétrole en Allemagne," *L'Europe Nouvelle*, January 13, 1940.

21. Cf. *The New York Times*, March 21, 1940.

22. *Economic Conditions in Germany in the Middle of the Year 1939* (Berlin, Reichskreditgesellschaft, August 1939), p. 10.

23. *Der deutsche Volkswirt*, December 22, 1939, p. 345.

24. This agricultural program was outlined in a radio speech delivered by Hermann Goering on February 15, 1940. Cf. *The New York Times*, and *New York Herald Tribune*, February 16, 1940; also *Deutsche Allgemeine Zeitung*, February 17, 1940. For a general review of German agricultural measures, cf. L. Franklin, "Wartime Agricultural and Food Control in Germany," *Foreign Agriculture*, April 1940.

during the last war. The distribution of nitrates for 1939-40, which was first reduced to 75 per cent of the quantity used in 1938-39, was raised in January 1940 to 95 per cent.<sup>25</sup> Ample supplies of potash and lime have been made available, and the government hopes to obtain some phosphates from the Soviet Union. Meanwhile, however, consumption of phosphates has been limited to 40 per cent of the 1936-37 level. To insure the most efficient use of fertilizer supplies, agricultural experiment stations were ordered in November 1939 to take 7 million soil tests during the next three years.<sup>26</sup> The overburdened machine industry has been instructed to concentrate on the production of agricultural machines which can save the most labor, and peasant leaders have been told to insist as far as possible on the communal use of whatever machinery is available. In addition, some 55,000 farm laborers have been imported from Slovakia and Italy, and others from the Balkans.<sup>27</sup> Most of the 300,000 Polish war prisoners, as well as about 800,000 other Polish workers, have also been put to work on German farms during 1940.<sup>28</sup>

### TAPPING LABOR RESERVES

From the very beginning the Nazi government realized the importance of an adequate supply of labor. Since there was a marked shortage of all kinds of workers even before the war, it proved difficult to mobilize additional labor reserves. The government did its best, however, to exempt skilled workers in vital industries from military service. Sweeping decrees issued in September 1939 forbade all workers and employees to leave their jobs without the consent of the local Labor Office and lifted all restrictions on hours of work for adult men. They also abolished the prohibition on night work for women, and empowered the authorities to remove all limitations governing the employment of women and children under 18.<sup>29</sup> These drastic measures, however, caused discontent and fatigue which in turn slowed up the tempo of industrial production. A new decree of December 12, 1939 limited the working day to 10 hours and, with special permission, to 12 hours. Night work for women and young people was again prohibited and their working week restricted to 56 hours, al-

though exemptions could be made with special approval.<sup>30</sup>

Despite readjustments in production, the number of registered unemployed was reduced by the end of November 1939 to 126,000, of whom only 18,000 were fully employable.<sup>30a</sup> Restrictions on the output of consumers' goods, however, increased the number of workers with only part-time employment to about 1,000,000 by March 1940.<sup>31</sup> In order to utilize all available labor, orders issued in September and November 1939 required employers who could release skilled workers to report them immediately to local Labor Offices. All business concerns were obliged, on demand of the authorities, to hire workers for retraining and to employ women for work formerly done by men.<sup>32</sup> In addition, commissions were named in 1940 to inquire into the volume of orders and labor in specific enterprises and to make recommendations regarding the most effective use of workers.<sup>33</sup> These measures had resulted by February 1940 in the retraining of 500,000 men and the recruitment of nearly 2,000,000 women.<sup>34</sup> Special efforts were made to mobilize women with household duties for part-time work. Children leaving school were directed to those occupations in which the greatest dearth of labor existed. For this purpose, the employment of all apprentices was made subject to the approval of the Labor Offices, which business concerns were instructed to apprise of their needs.<sup>35</sup>

Despite the thoroughness of its action, the government could not fully cope with the growing scarcity of labor. The many "help wanted" columns in the daily papers have testified to a large, unfilled demand. The shortage of office workers and technicians has been particularly severe. While the state could train semi-skilled or even skilled labor in a relatively short time, it could not produce managerial and supervisory personnel overnight. Nor was it able to recruit enough engineers and chemists. The low birth rate during the World War, combined with the attraction of army or party careers, had greatly reduced the number of graduates from universities and technical high schools in recent years. These deficiencies could not be eas-

25. For the Sudetenland and Austria the percentage was increased from 100 to 125. Cf. *Der deutsche Volkswirt*, February 2, 1940.

26. *Ibid.*, November 17, 1939, p. 182.

27. Franklin, "Wartime Agricultural and Food Control in Germany," cited, p. 213.

28. *Nieuwe Rotterdamse Courant*, April 8, 1940.

29. *Reichsgesetzblatt*, I, 1939, pp. 1685, 1690; cf. also *Völkischer Beobachter*, September 9, 1939.

30. Deutsche Bank, *Wirtschaftliche Mitteilungen*, December 1939, p. 271.

30a. According to Dr. Seldte, Minister of Labor, the number of unemployed in Greater Germany amounted to 256,000 in January 1940, but dropped to 105,000 in April 1940. Cf. *The Economist*, May 11, 1940, p. 859.

31. *The Economist*, March 16, 1940.

32. Deutsche Bank, *Wirtschaftliche Mitteilungen*, November 1939, p. 255.

33. *Der deutsche Volkswirt*, February 9, 1940.

34. *Ibid.*, February 2, 1940, p. 552, and *The Economist*, March 16, 1940.

35. *Der deutsche Volkswirt*, October 13, 1939.

ily repaired. The labor problem became even more acute when "total war" was launched in May 1940 and an ever growing number of men were called up for military service.

### CONSERVATION OF RAW MATERIALS

Adequate supplies of raw materials were, of course, equally essential to the maintenance of production. The continuation and expansion of the Four-Year Plan program made more domestic materials available. Every last reserve was tapped. A special campaign was launched in March 1940 for the collection of all dispensable objects made from tin, bronze, brass, lead, nickel and copper; and the resulting stock was presented to the Führer on April 20 as a birthday gift from the nation. In order to reclaim every bit of copper, coins of bronze were withdrawn from circulation and new ones consisting primarily of zinc were substituted. Nickel coins of one-half and one mark were replaced by aluminum coins and paper money.<sup>36</sup> At the beginning of the war the government took over stocks of nearly all essential commodities in order to insure their utilization for absolutely indispensable purposes. The number of offices which controlled the distribution of raw materials long before the war was increased, and their regulations were made much more severe. The use of non-ferrous metals, in which Germany is short, was sharply curtailed. Even before the war raw materials had been rationed, because foreign exchange difficulties had limited Germany's ability to import, and some reserve stocks had to be accumulated. In many cases, however, supplies had been allocated to manufacturers simply according to a percentage of the amount consumed during a definite period in the past. After the outbreak of hostilities, this system was completely discarded in favor of apportionment strictly according to need. Thus, in the textile industry, raw materials were assigned only to concerns which could show that they had officially approved orders for goods; and orders were placed only in accordance with a scale of priority whereby army orders came first, other government orders second, important industrial requirements third, and civilian clothing needs last.<sup>37</sup>

A great saving in raw materials and foodstuffs was effected by the Spartan régime imposed on German consumers. Among the industrial products rationed from August 27, 1939 were soap, shoes and virtually all textile products. For soap, which had hitherto been manufactured largely from imported vegetable oils and fats, the ration was exceedingly

scanty and poor in quality. Shoes could be bought only on proof of real need, so that all available leather might be reserved for the army. In the spring of 1940 shoes with wooden soles and heels, and cloth tops appeared on the market. Clothing also could at first be obtained only in case of need. Since this system proved too cumbersome and difficult to administer, the government introduced on November 14 a clothing card which assigned a certain number of points to every article of apparel from neckties to underwear. Each person was permitted to buy clothing up to 100 points per year. A suit alone counted as 60 points, a pair of shorts as 15, pajamas 25, and a shirt 20.<sup>38</sup> Overcoats could not be bought on the clothing card, but were generally made available only if a worn overcoat was surrendered in exchange. While other industrial consumers' goods were not rationed, many of them gradually disappeared from store shelves since new supplies could not be secured.

### SPARTAN FOOD RATIONS

Food rationing first became effective on August 27, 1939, and was elaborated and broadened on September 25. It covered bread and flour, meat, fats (including butter, margarine, lard, bacon, etc.), marmalade, sugar, eggs, whole milk, coffee substitutes, and such products as oatmeal, rice, potato-starch meal, sago and pudding powder. In theory, people remained free to buy potatoes, vegetables, fruit, skimmed milk, fish and game in any quantity. Actually, fresh vegetables and fruit were extremely scarce during the winter of 1939-40, fish almost impossible to obtain, and game too expensive. Even potatoes were not plentiful in some cities, partly because transportation facilities were inadequate, partly because the unusually severe winter damaged stocks. In Berlin and other large cities potatoes were virtually rationed by April 1940.<sup>39</sup> Only substitutes for coffee and tea have been available, and whole milk has been reserved for invalids, children, and expectant and nursing mothers.

The rations were extremely drastic, largely because the government wanted to stretch supplies as far as possible and considered it advisable to avoid a *gradual* restriction of consumption which might impair civilian morale. A comparison of present with previous consumption is difficult, since accurate statistics are lacking and the rations are different for "normal consumers," "hard workers," and "very hard workers," with no indication as to the number falling in each category. A study of

36. *Nieuwe Rotterdamsche Courant*, April 7, 1940.

37. *Der deutsche Volkswirt*, October 13, 1939, p. 38.

38. For a description of the clothing card, cf. *Völkischer Beobachter*, November 15, 1939.

39. *Business Week*, April 27, 1940, p. 60.

working-class budgets carried out in 1937, together with other material gathered on the consumption habits of about 1,000 industrial workers in 1936, gives only a very rough basis of comparison. As the accompanying table reveals, the "normal" consumer's ration is considerably below that consumed by the average adult member of a working class family in 1937. He eats 6.5 per cent less bread and flour, 28 per cent less meat, and 24 per cent less fats. These reductions are all the more severe because the German diet has in recent years been substantially inferior to that prevailing before the economic depression. Moreover, the "normal" ration demands particularly heavy sacrifices from those who were able to afford a fairly high standard of living in the past. Statistics on the consumption of higher income groups are available only for the years 1927-28, but these indicate that the present "normal" allowances of meat, fats, cheese and sugar are respectively

43, 41, 30 and 11 per cent below pre-depression levels.<sup>40</sup> The wealthier classes can to some extent offset these deficiencies by buying more high-priced, non-rationed foodstuffs.

On the other hand, the German government has taken care that the army is adequately fed. Manual laborers who perform heavy enough work to get extra rations also appear to be comparatively well-provided with bread, meat and fats. There are some reports, however, that even these rations are inadequate in view of the amount of overtime work required. The most serious shortage is that of non-rationed foods such as fish, fresh vegetables and fruit and, occasionally, potatoes. These make the German diet deficient not only in calories, but above all in the vitamin-rich or "protective" foods.<sup>41</sup> Here and there the authorities are trying to meet this lack through distribution of vitamin pills, particularly to soldiers and children.

#### FOOD RATIONS OF ADULTS COMPARED WITH PRE-WAR CONSUMPTION\*

FOOD	RATIONS PER WEEK IN GRAMS			PRE-WAR CONSUMPTION	
	Normal consumer	Hard worker	Very hard worker	Working families in 1937	Heavy manual workers in 1936
Bread and flour†	2,400.0	3,800.0	4,800.0	2,565.0	3,300.0
Meat and meat products	531.0	1,031.0	1,231.0	737.0	1,276.0
Fats—total	268.7	393.7	737.5	354.0	781.0
Cheese	62.5	62.5	62.5	159.0	236.0
Eggs‡	1.0	1.0	1.0	1.2	4.0
Sugar	250.0	250.0	250.0	291.0	254.0
Marmalade	100.0	100.0	100.0	.....	.....
Sago, rice, oatmeal, potato-starch, flour, etc.	125.0	125.0	125.0	.....	.....
Whole milk (liters)	None	None	None	1.9	4.0

\*The rations are taken from allotments made for the four-week period November 20 to December 17, 1939 (cf. *Völkischer Beobachter*, November 14, 1939). The figures on consumption of adult members of working-class families are derived from an official German study of working-class budgets carried out during 1937. A sample of the results of this study were published in *Wirtschaft und Statistik*, No. 8, 1939. The statistics on consumption of heavy manual laborers are taken from an article by Wilhelm Ziegelmayer, "Die Kost der Schwerarbeiter," *Zeitschrift für Volksernährung*, July 20, 1937.

†In terms of bread.

‡Ration not generally available. During the four weeks ending December 17, 1939, four eggs were made available for every consumer.

The food situation seems unlikely to improve in the future. The occupation of Denmark and the Netherlands has brought a temporary but welcome addition to the supply of dairy products and vegetables. At the same time, the severe winter and late spring will probably cause relatively poor harvests in Germany and the Balkans. On the whole, the careful conservation of available supplies, together with home production, should prevent the development of conditions approaching the semi-starvation evident during the last two years of the World War. Although continuation of the present rations over a long period would undoubtedly impair the

health of the German people, the diet is generally sufficient to still the pangs of hunger. Meanwhile, the curtailment of consumption has set free purchasing power which the government can mobilize to defray the cost of war.

#### FOREIGN TRADE

The German government has made every effort to cover its food and raw materials deficit abroad. The Reich has given export orders a priority ranking immediately below the fulfillment of army contracts. The blockade, however, cut Germany off from about half its normal imports. Italy, Switzerland, the Balkans, the Soviet Union and northern

40. These figures relate to families with an average annual income of 4,712 Reichsmarks in 1927-28. Cf. Reinhard Schaefer, "Freigesetzte Kaufkraft und Kriegsteuerpolitik," *Wirtschaftsdienst*, January 19, 1940.

41. Cf. Franklin, "Wartime Agricultural and Food Control in Germany," cited, pp. 193-94.



Europe were the only sources of supply left open to the Reich. Enemy countries and overseas neutrals had accounted for a large proportion of the Reich's imports of strategic raw materials—98.5 per cent of the cotton, 87.7 per cent of the copper, all of the rubber, and 44.1 per cent of the iron ore bought abroad.<sup>41a</sup>

The suppression of German foreign trade statistics makes it virtually impossible to judge what success Germany has had in maintaining and promoting its trade with these countries. The available trade figures of some of the neutral or ex-neutral European countries indicate that Germany was fairly successful in keeping up its exports. Thus it proved possible to increase sales to Bulgaria, Rumania and Hungary. Trade with Greece dropped sharply owing to the interruption of sea communications, while business with Turkey suffered severely from Turkish friendship with the Allies. Exports to other European neutrals stood up well. In many cases, however, these countries successfully insisted that part of the proceeds be earmarked for liquidation of commercial clearing indebtedness. Even Italy, Germany's ally, declined to deliver except against cash until the clearing arrears was reduced.

The Reich has continued its pre-war campaign to develop the resources of the Balkans for its own use. In Yugoslavia, the German firm of Krupp has been active in founding companies to exploit mining concessions, buy up agricultural products, and develop the cultivation of cotton. In Rumania, Germans have bought up a few small oil companies and established concerns to encourage the cultivation of oil seeds and market agricultural produce;<sup>42</sup> and the Rumanian government, apparently in co-operation with Berlin, announced in March 1940 a five-year farm program to increase production of oil seeds, fodder and feed, all of which the Reich needs.<sup>43</sup> Yet Germany cannot expect to realize on most of these projects for several years.

Meanwhile, the Reich has in general been unable to do more than maintain its pre-war volume of imports from the remaining neutral countries of Europe. Some of these imports, however, probably consisted of vital raw materials which were indirectly supplied by overseas countries in spite of the blockade. Here and there Germany has also managed to obtain, through barter, raw materials

which formerly had to be paid for in free foreign exchange. In this way the Reich has exchanged armaments for Yugoslav copper and lead and for Rumanian oil. Quantities, however, have been small. In the first seven months of the war Germany obtained only 464,000 metric tons of Rumanian oil, as compared with 876,000 tons exported to the Allies. Although a Rumanian-German agreement of December 1939 provided for a quota of 130,000 tons per month, in addition to certain deliveries in arrears, the total actually shipped from December 1939 to March 1940 inclusive averaged only 91,000 tons.<sup>44</sup>

The hope placed by many Germans on the development of German-Russian trade appears to have been disappointed, although statistical evidence is lacking. The first trade agreement between the Reich and the U.S.S.R. in August 1939 was not particularly favorable to Germany. It authorized the U.S.S.R. during the next two years to buy 200 million marks of German goods on long-term credit, and 120 million marks more through compensation. In return, Germany was promised only 180 million marks of raw materials and foodstuffs during the next two years.<sup>45</sup> A contract, concluded in October 1939, in which the Soviet Union undertook to deliver 1,000,000 tons of much-needed fodder, seems to have been performed only in small part.<sup>46</sup> After prolonged negotiations, the two countries agreed in February 1940 on a program of deliveries exceeding the volume of exchange in any post-World War year—presumably 1931, when it amounted to a little over 1,000,000,000 marks.<sup>46a</sup> Details have not been forthcoming, and the announcement of the "program" may have been designed largely to impress the outside world.

In practice the Soviet Union has apparently shown little disposition to cooperate with Germany. In December 1939 it agreed not to change the standard gauge on that portion of the Bucharest-Cernauti-Lemberg-Berlin railway line which runs through the Russian-held section of Poland. In order to expedite traffic between Rumania and Germany, it also undertook to facilitate the transit of six trains daily, each of fifty cars.<sup>47</sup> Actually, the Russians seem to have put every obstacle in the way of operating this agreement. From December 3, 1939 to May 1, 1940 the volume of goods

41a. For a full discussion of this subject, cf. H. C. Hillmann, "Analysis of Germany's Foreign Trade and the War," *Economica*, February 1940.

42. For a survey of German trade and economic activity in the Balkans, cf. Werner Fischer, "Umwälzungen im neutralen Aussenhandel," *Der deutsche Volkswirt*, February 16, 1940, and "Germany in the Balkans," *The Economist*, March 23, 1940.

43. *Nieuwe Rotterdamsche Courant*, March 27, 1940.

44. Cf. *The Economist*, April 13, 1940, p. 681.

45. Fritz Werner, "Der deutsch-sowjetische Aussenhandel," *Der deutsche Volkswirt*, September 1, 1939.

46. According to one report, a fourth of the contracted amount had arrived in Germany by the middle of March. Cf. *The New York Times*, April 4, 1940.

46a. *Deutsche Bergwerks-Zeitung*, February 14, 1940.

47. Department of Commerce, *Foreign Railway News*, January 19, 1940, p. 814.

which was shipped via the Cernauti-Lemberg route amounted to only 28,450 tons, as compared with a contemplated total of 450,000.<sup>47a</sup>

### COMBATING TRANSPORTATION DIFFICULTIES

Inadequate transportation facilities have seriously handicapped mobilization of the economic resources of Eastern Europe. Overburdened railways and inland waterways must now carry the large volume of traffic which formerly went by sea. Work is being pushed on canals linking the Vistula in Eastern Germany with the Dnieper river and the Black Sea, and connecting the Danube with the Oder in Eastern, and the Main and Rhine rivers in Western Germany; but these projects cannot be completed for several years. In February 1940 the government-owned Hermann Goering Werke organized the *Donau Lloyd*, a Danube shipping pool, including not only German companies, but several Slovak and Hungarian river transport firms. The Germans, however, have had to contend with the French and British, who have bought up or chartered a considerable portion of the tankers and barges on the Danube. The bulk of Germany's trade, both domestic and foreign, must be carried by rail. The Russian and Balkan railways are over-taxed, although the Soviet government is trying to increase both the mileage and the rolling stock of its railroads in the current (third) Five-Year Plan.<sup>48</sup> The German government has been much concerned about the inability of the Reich railways to cope with the large volume of civilian and military traffic. Even before the war the railroads were a serious bottleneck in the German economy. In the fall of 1938 the railways were handling 10 per cent more traffic than in 1929 although they had 4,000 fewer locomotives and 8,000 fewer freight cars.<sup>49</sup> After the outbreak of war every effort was made to increase the efficiency and conserve the use of the railways. Special commissioners were appointed for each railway district to adjust the transportation requirements of industry to available facilities.<sup>50</sup> The number of passenger trains was drastically reduced. Freight cars had to be unloaded also on Sundays and holidays. Early in November 1939 the Reich railways successfully floated a loan of 500,000,000 Reichsmarks, the proceeds of which were

set aside to provide railway connections for new Four-Year Plan enterprises, to add new rolling stock, and to improve and extend the rail network in the east.<sup>51</sup>

Prior to the war the Nazi government had stressed the development of motor transport. It planned a network of automobile highways to supplement the railways and facilitate the rapid transportation of troops and military supplies to all parts of the German frontier. By the middle of 1939, 3,065 kilometers had been completed and opened to traffic, 1,383 kilometers were under construction, and preliminary work was proceeding on 2,449 kilometers.<sup>52</sup> The outbreak of war compelled Germany to cut this building program by half. Work was continued only on those stretches which were of the greatest strategic and economic importance, particularly in linking Germany with its newly acquired territories in the east. The volume of motor traffic also had to be sharply curtailed in order to economize on gasoline. The number of private passenger autos in circulation was cut to 15 per cent of the pre-war total. From the beginning of 1940 long-distance trucking was prohibited unless recognized as essential to the prosecution of war. Steps were taken to convert many trucks to the use of methane or butane gas as a motor fuel.

### FINANCING THE WAR

The economic and military mobilization of Germany has entailed a vast outlay in money as well. Much of the cost of putting the country's economy on a war footing has been imposed on private business. With taxes coming in at the rate of 27 billion marks<sup>53</sup> per year and the public debt rising about 2 billion marks during each of the first three months of the war,<sup>54</sup> the German government itself is probably spending well over 50 billion marks a year. This total compares with a current national income of approximately 85 to 90 billion marks.<sup>54a</sup>

At the beginning the Reich was determined to use Draconic methods in financing the war. Officials stressed that the disastrous inflation which developed at the end of the last war must be prevented at all costs. This could be accomplished only by a Spartan fiscal régime. No one was to make money out of the war. Everyone had to shoulder sacri-

47a. Cf. dispatch by Eugen Kovacs, *The New York Times*, May 26, 1940.

48. A. Abrahamson, "The Economic Development of the Soviet Union under the Second and Third Five-Year Plans," *International Labour Review*, February 1940.

49. U.S. Department of Commerce, "Present Position of the German Railways," *Foreign Railway News*, Special Issue, December 20, 1939.

50. *Der deutsche Volkswirt*, October 13, 1940, p. 40.

51. *Ibid.*, November 10, 1939.

52. *Deutsche Bergwerks-Zeitung*, June 29, 1939.

53. Deutsche Bank, *Wirtschaftliche Mitteilungen*, January 1940, p. 4.

54. *Ibid.*, p. 5; cf. also *New York Herald Tribune*, March 13, 1940.

54a. Germany's national income for 1938 has been officially estimated at 79.7 billion marks, or between 87 and 88 billion if that of Austria and the Sudetenland is added. Cf. *Frankfurter Zeitung*, December 10, 1939.

fices. Prices, wages and salaries were to be kept stable and even reduced to some extent. A large part of the war expenditure was to be met out of tax proceeds. The price and income structure of the country must not be disorganized by a "vicious" spiral of rising prices and wages.

In practice this program was not completely carried out. The War Economy Decree of September 4, 1939 authorized the State Labor Trustees to fix maximum wages and salaries in accordance with war conditions.<sup>55</sup> The purpose was to freeze wages and, if necessary, to reduce rates of compensation in occupations where a shortage of skilled labor had brought about marked increases during recent years. The decree also abolished paid vacations and forbade extra pay for overtime or night work, and for work on holidays and Sundays. The savings in labor costs thus effected were to be handed on to the Reich Treasury. These measures, however, occasioned such dissatisfaction that they soon had to be partially repealed.<sup>55a</sup> A decree of November 16, 1939 restored paid vacations from the beginning of 1940 and again permitted the payment of overtime wages, but only for work beyond ten hours on week days and at a rate not exceeding the normal compensation by more than 25 per cent.<sup>56</sup> With industry working long hours and virtually all available labor utilized, and with the government paying liberal allowances to dependents of soldiers, the money income of the German people has risen since the beginning of the war. Only the rationing of necessities and strict control over prices have warded off any inflationary consequences.

Nor have the new taxes been quite as severe as originally contemplated. The War Economy Decree of September 1939 raised income taxes by 50 per cent, but only on incomes over 2,400 Reichsmarks a year and on condition that the total tax be not more than 65 per cent of income. The majority escaped additional direct taxes, but had to pay heavier levies on beer, tobacco, champagne and liquors. While these new taxes increased Reich revenues by about 16 per cent in the first four months of the war,<sup>57</sup> they helped finance but a small portion of the expenditure.

The Reich, however, finds it difficult to impose still more taxation, particularly since the tax screw had already been considerably tightened before the

war. Corporations must pay an income levy of 40 per cent in addition to other taxes, and contribute toward the cost of maintaining enterprises closed by the war. Dr. Funk, Minister of Economics, has repeatedly warned against heavier taxation which would impair the capital of industry and deprive business of the incentive to produce, a factor he apparently believes essential even in a totalitarian state. As a partial escape from this dilemma, some of the burden has been shifted to the local and provincial governments. The War Economy Decree compelled these governments to contribute about 1.5 billion marks to the Reich;<sup>58</sup> and a law of February 1940 further reduced their share of tax revenues.<sup>59</sup> These measures have not provided a solution, however, since the local and provincial governments themselves have to shoulder additional expenditures arising from the war.<sup>60</sup>

New taxes have not yet become absolutely imperative because the German government has not experienced any real difficulty in borrowing. Up to the present, long-term loans have been avoided in order to leave the capital market free to absorb bond issues of essential industries. In the past few years the Nazis had used a variety of devices to obtain money. From the beginning of May to the end of October 1939, the Reich and all other public bodies paid 40 per cent of amounts due to government contractors in the form of tax certificates (*Steuergutscheine*) which could in turn be used to pay sub-contractors or, under certain conditions, to meet tax obligations. This financial instrument proved so cumbersome and complicated that the issue of tax certificates was suspended as from November 1.<sup>61</sup> Since that date the government has borrowed on short-term Treasury bills and notes, and in the spring of 1940 it also began to issue 4 per cent medium-term Treasury bonds.<sup>62</sup> The banks have so far been able to absorb virtually all these issues. The sharp curtailment of consumption and the gradual reduction of stocks in industry and trade has greatly swollen the amount of idle money available for investment. In addition, a large volume of cash has accumulated in the social insurance funds, particularly the unemployment insurance fund which has few obligations to meet in a time of full employment. Deposits in commercial

55. Deutsche Bank, *Wirtschaftliche Mitteilungen*, September 1939.

55a. Dr. Seldte, the Minister of Labor, admitted that workers considered the abolition of extra pay for overtime unjust. Cf. *Der deutsche Volkswirt*, December 22, 1939, p. 327.

56. *Ibid.*, November 24, 1939, p. 208. Extra pay for Sundays and holidays was also restored.

57. The new levies accounted for 1,257 million marks out of a total revenue of 8,964 million. Cf. *ibid.*, January 1940, p. 4.

58. H. Berthold, "Der Kriegsbeitrag der Länder und Gemeinden," *Der deutsche Volkswirt*, September 15, 1939.

59. H. W. Aust, "Finanzausgleich im grösseren Reich," *ibid.*, March 8, 1940.

60. *Ibid.*, December 15, 1939, p. 299.

61. On that date the amount outstanding was 4,832 million marks. A decree of April 1, 1940 prohibited further use of tax certificates as means of payment, thus converting them into a straight government loan.

62. By May 19, 1940, 2.5 billion marks of these 4% bonds had been sold. Cf. *The New York Times*, May 20, 1940.



and savings banks have therefore risen rapidly.

The government has pursued a "cheap money" policy in order to reduce the cost of borrowing and prepare the way for the flotation of new, or the conversion of old long-term loans. On April 9, 1940 the Reichsbank lowered its discount rate from 4 to 3½ per cent. Subsequently the Reich Credit Control Board reached an agreement with the bankers' organization to reduce the interest rate on savings accounts and time deposits.<sup>63</sup>

In the future, however, the Reich may experience greater financial difficulties, particularly as expenditures grow and the banks become stocked up with Treasury issues. The amount of bills and checks, including Treasury bills, discounted by the Reichsbank rose from 8,461 million marks at the end of July 1939 to 12,568 million on June 3, 1940. Simultaneously the volume of currency in circulation increased rapidly from 8,731 to 12,594 million marks. The government may have to impose a compulsory savings plan on the people in order to arrest this trend. The totalitarian economic system, however, permits much financial juggling. As long as the people have confidence in the government and believe in the ultimate triumph of German arms, the Nazis may even meet a large part of the war expenditure directly or indirectly through the issue of new money without any tangible backing. The additional purchasing power thus created can be tapped by new taxes and borrowing. Inflation may be prevented as long as people can buy only a limited quantity of goods at prices which are severely controlled. So far the government appears to have been successful in keeping the general price level stable. Although some price increases have been permitted to compensate for increased costs of labor, raw materials and the like, strenuous efforts have been made to secure offsetting price reductions by standardizing and rationalizing production, revising cartel prices, and keeping a careful check on the costs of government contractors.<sup>64</sup>

### THE BALANCE SHEET

On the whole, Germany carried out its economic mobilization with great thoroughness and attention to detail. The pre-war organization of German economic life, together with excellent planning, enormously facilitated the transition to a complete war

63. Cf. *The Economist*, May 11, 1940, p. 859.

64. Cf. E. Flottmann, "Preisbildung- und Preisbestimmungsgründe," *Der deutsche Volkswirt*, December 15, 1939, and M. Sellmann, "Sind noch Kriegsgewinne möglich?" *ibid.*, December 1, 1939.

economy. The Reich could immediately strike with its maximum strength while its opponents were slowly mobilizing their economic and military power. Germany's totalitarian government has had no hesitation in subordinating everything to war and in exacting sacrifices from every one. At the same time the state has not, with few exceptions, assumed direct charge of production. It decided what was to be done, but imposed the responsibility for carrying out the program squarely on private enterprise. It has readily employed expert engineers and industrialists, but always under the strict control and direction of the government. This is an example which the United States could perhaps follow with profit.

No amount of organization and effort could, of course, overcome certain basic weaknesses in the German economy. The Allied blockade inevitably worked serious hardships in a country that is normally far from self-sufficient. The effects of the blockade could be mitigated, but not offset, by the manufacture of substitutes, conservation of available supplies, and sharp curtailment of civilian consumption. The attempts to develop new sources of supply in the Balkans and the Soviet Union have so far proved disappointing, in large part because of limited transportation facilities. The conquest of Denmark, most of Norway, the Low Countries and Luxemburg has brought temporary economic relief. Germany acquired a virtual monopoly of the iron ore exports of Sweden and Luxemburg, and of the small copper, nickel and molybdenum deposits of Norway. It came into the possession of stocks of raw materials which these ex-neutrals had accumulated as reserves during the first period of the war. In Denmark and the Netherlands it also obtained a valued source of dairy products, meat and vegetables, even though these countries cannot in the long run be expected to produce agricultural surpluses without sizeable imports of fodder and feed which Germany cannot supply. Although Germany has been compelled to dig into its reserves, it has not been seriously weakened up to the present. In a long war the deficiencies in the German economy might well become critical, particularly with respect to oil supplies. Hitler is therefore banking heavily on a successful outcome of the *Blitzkrieg* launched early in May. While failure of the *Blitzkrieg* would greatly minimize the chances of a German victory, it would not necessarily mean a quick defeat because the Reich has girded itself for a long conflict.

*The July 1 issue of FOREIGN POLICY REPORTS will be*  
**WARTIME ECONOMY OF FRANCE AND BRITAIN**

*by D. H. Popper, J. C. deWilde*